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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,299	09/11/2000	Nissim Garti	HES 2 0001	9706

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EXAMINER

LOVERING, RICHARD D

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 12/10/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

7C-11

Office Action Summary

Application No.

09/622,299

Applicant(s)

GARTI ET AL.

Examiner

LOVERING

Group Art Unit

1712

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

P r i d e R s p n s e

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on AUG. 29, 2002

- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disp osition of Claims

- ☒ Claim(s) 12-30 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 12-30 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Pri ority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachm nt(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit 1712

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 12, 15-18, 26 and 28-30 are rejected under 35 U.S.C. § 102(a) as being anticipated by Yadav et al. 6,228,904 of record, esp. Example 4 referring to Example 1. The instant claims in "comprising" don't exclude the burning and collecting steps disclosed in Example 1 of Yadav et al. Note that claim 26 herein doesn't require the presence of a surfactant.

4. Claims 14 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yadav et al. above. The especially pertinent portions of Yadav et al. are pointed out in the preceding paragraph. As to claim 14 herein, while Yadav et al. may not specifically disclose nanomaterial particles having the size range of 1-5 nm, it would have been obvious to one skilled in the art at the time applicants' invention was made to control reaction conditions, e.g. concentrations of reactants, in the Yadav et al. method to obtain nanomaterial particles in the range of 1-5 nm when the ultimate intended use makes such small size

Art Unit 1712

particles necessary or desirable. Note that Yadav et al. (column 3, lines 2-4) contemplate producing nanostructured powders having sizes even smaller than 30 nm. Assuming some small difference in size between the claimed particles and those of the reference, applicants have shown no criticality in any difference. See In re Arnold, 137 USPQ 330. As to claim 27 herein, while Yadav et al. don't exemplify producing nanoparticles of cobalt and/or nickel oxides which are coated with poly(methyl methacrylate), it would have been obvious to one skilled in the art at the time applicants' invention was made to substitute cobalt and/or nickel nitrates for the indium and tin salts in Examples 1 and 4 of Yadav et al. in view of their interchangeability disclosed by Yadav et al. (paragraph bridging columns 1 and 2; and column 2, lines 44-59, also noting Example 5).

13. 22 aw 6/22/10
5. Claims 12-26 and 28-30 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for [transition metals, alloys, metal oxides and ceramics as to the "nanomaterial" (specification page 1, first paragraph)], does not reasonably provide enablement for surfactants. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to [make] the invention commensurate in scope with these claims. The chemistry of surfactants is substantially different from that of transition metals, alloys, metal oxides and ceramics, and the

Art Unit 1712

disclosure of this application provides no enablement as to preparing nanoparticles of surfactants, for example copolymers of ethylene oxide and propylene oxide such as Pluronics[®], some of which are liquid. It would involve more than routine experimentation on the part of one having ordinary skill in the art to produce nanoparticles of surfactants.

6. In claim 27, line 4, "oxychloride" should be changed to --oxychloride--.

7. Claims 13 and 19-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record doesn't disclose or fairly suggest the embodiments of applicants' method for producing nanomaterial particles using "complex water" (claim 13); a microemulsion or liquid crystalline material (claims 20 and 21, resp.); or the solvents recited in claims 22-25.

9. Applicant's arguments with respect to claims 12-30 have been considered but are deemed to be moot in view of the new grounds of rejection.

Art Unit 1712

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10. Lamanna et al. 4,871,790, Ritter et al. 5,316,699 and Ziolo et al. 6,048,920 (cited on the attached Form PTO-892) further show the state of the art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lovering whose telephone number is (703) 308-0443. The examiner can normally be reached on Mon.-Fri. from 7:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached on (703) 308-2340. The fax phone number for this Group is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

R. Lovering:cdc
December 9, 2002

Richard D. Lovering
RICHARD D. LOVERING
PRIMARY EXAMINER
GROUP ~~1200~~ 1700